

Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) An optical module, to which an optical plug ~~provided at one end of that is part of an~~ optical transmission path is attached, so as to transmit and receive signal light via the optical transmission path for information communication, comprising:

a transparent substrate having light transmittance properties with respect to a wavelength of a signal light;

an optical socket, which is arranged on one ~~surface~~-side of the transparent substrate and to which the optical plug is attached, the optical socket having guide surfaces to position the optical plug, the guide surfaces include two surfaces substantially parallel to each other and substantially orthogonal to the another surface of the transparent substrate, and one surface substantially parallel to the another surface of the transparent substrate;

an optical element, which is arranged on another ~~surface~~-side of the transparent substrate and emits the signal light to the one ~~surface~~-side of the transparent substrate according to a supplied electrical signal, or generates an electrical signal according to the intensity of the signal light supplied from the one ~~surface~~-side of the transparent substrate; and

a reflective portion, which is arranged on the one ~~surface~~-side of the transparent substrate and changes a path of the signal light emitted from the optical element at substantially 90 degrees to guide the signal light to the optical transmission path, or changes a path of the signal light emitted from the optical transmission path at substantially 90 degrees to guide the signal light to the optical element.

2. (Original) The optical module according to claim 1, the reflective portion being formed in the optical socket.

3. (Original) The optical module according to claim 1, further comprising:
a first lens, which converges the signal light emitted from the optical element to guide the signal light to the reflective portion, or converges the signal light, emitted from the optical transmission path and reflected by the reflective portion, to guide the signal light to the optical element.

4. (Original) The optical module according to claim 3, the first lens being formed in the optical socket.

5. (Original) The optical module according to claim 3, the first lens being formed on the transparent substrate.

6. (Currently Amended) An optical module, to which an optical plug provided at one end of an optical transmission path is attached, so as to transmit and receive signal light via the optical transmission path for information communication, comprising:

a transparent substrate having light transmittance properties with respect to a wavelength of a signal light;

an optical socket, which is arranged on one ~~surface~~-side of the transparent substrate and to which the optical plug is attached, and which is adapted to guide the signal light to or from a second lens formed in the optical plug;

an optical element, which is arranged on another ~~surface~~-side of the transparent substrate and emits the signal light to the one ~~surface~~-side of the transparent substrate according to a supplied electrical signal, or generates an electrical signal according to the intensity of the signal light supplied from the one ~~surface~~-side of the transparent substrate;

a reflective portion, which is arranged on the one ~~surface~~-side of the transparent substrate and changes a path of the signal light emitted from the optical element at

substantially 90 degrees to guide the signal light to the optical transmission path, or changes a path of the signal light emitted from the optical transmission path at substantially 90 degrees to guide the signal light to the optical element; and

a first lens formed in the optical socket, which converges the signal light emitted from the optical element to guide the signal light to the reflective portion, or converges the signal light, emitted from the optical transmission path and reflected by the reflective portion, to guide the signal light to the optical element; ~~and~~

~~————— a second lens, which converges the signal light, emitted from the optical element and reflected by the reflective portion, to guide the signal light to the optical transmission path, or converges the signal light emitted from the optical transmission path to guide the signal light to the reflective portion.~~

7. (Original) The optical module according to claim 6, the second lens being formed in the optical plug.

8. (Original) The optical module according to claim 6, the second lens being formed in the optical socket.

9. (Original) The optical module according to claim 6, the first lens converging the signal light emitted from the optical element into substantially parallel light and the second lens converging the signal light emitted to the optical transmission path into substantially parallel light.

10-11. (Canceled)

12. (Currently Amended) The optical module according to claim 1, further comprising:

a pressing device to press the optical plug to the other ~~surface~~ side of the transparent substrate.

13. (Canceled)

14. (Previously Presented) The optical module according to claim 1, wherein the guide surfaces include two surfaces substantially orthogonal to each other and arranged at an angle of substantially 45 degrees with respect to the another surface of the transparent substrate.

15. (Original) The optical module according to claim 14, each of the two surfaces having a projection portion to bias the optical plug.

16. (Original) The optical module according to claim 1, further comprising:
a locking device to hold a state, in which the optical plug is fitted into the optical socket.

17. (Original) The optical module according to claim 1, the optical socket having a guide groove to position the optical plug.

18. (Original) The optical module according to claim 17, the guide groove includes a surface substantially parallel to the one surface of the transparent substrate and surfaces substantially orthogonal to the one surface and penetrates from one end of the optical socket to the other end of the optical socket.

19. (Currently Amended) A manufacturing method of an optical module, comprising:

forming a wiring layer in a plurality of regions on one ~~surface-side~~ of a transparent substrate having light transmittance properties;

arranging an optical element on ~~another surface~~ the one side of the transparent substrate corresponding to each wiring layer;

mounting ~~an optical plug and an optical socket, each corresponding to each the~~
optical element, on ~~the another surface-side~~ of the transparent substrate, the optical socket being adapted to guide a signal light to or from a lens formed in an optical plug, and having
guide surfaces to position the optical plug, the guide surfaces include two surfaces

substantially parallel to each other and substantially orthogonal to the another ~~surface-side~~ of the transparent substrate, and one surface substantially parallel to the another ~~surface-side~~ of the transparent substrate; and

cutting and dividing the transparent substrate into the plurality of regions.

20. (Original) An optical communication device, comprising:

the optical module according to claim 1.

21. (Original) An opto-electrical hybrid integrated circuit, comprising:

the optical module according to claim 1.

22. (Original) A circuit board, comprising:

the optical module according to claim 1.

23. (Original) An electronic apparatus, comprising:

the optical module according to claim 1.

24-25. (Canceled)

26. (Currently Amended) The optical module according to claim 3, the first lens being arranged on the one ~~surface-side~~ of the transparent substrate and including a convex portion arranged on the transparent substrate.